

AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made.

1-39. (Canceled)

40. (New) A method of generating dependency information for code objects stored in a database, comprising:

recursively querying a database for one or more dependencies of procedural code objects stored in the database;

receiving an indication from the database of one or more dependencies of procedural code objects stored in the database; and

generating a dependency information tracking array based on the indication of one or more dependencies of procedural code objects.

41. (New) The method of Claim 40, further comprising:

recursively querying the database for one or more dependencies of specifications of object-oriented code objects stored in the database;

receiving an indication from the database of one or more dependencies of specifications of object-oriented code objects stored in the database; and

incorporating the one or more dependencies of specifications of object-oriented code objects into the dependency information tracking array.

42. (New) The method of Claim 40, further comprising:

recursively querying the database for one or more dependencies of implementations of object-oriented code objects in the database;

receiving an indication from the database of one or more dependencies of implementations of object-oriented code objects in the database; and

incorporating the one or more dependencies of implementations of object-oriented code objects in the database into the dependency information tracking array.

43. (New) The method of Claim 40, further comprising:
parsing the source code of the database for data manipulation statements that fire triggers; and
identifying one or more data manipulation statements that fire triggers.

44. (New) The method of Claim 43, wherein parsing the source code of the database for data manipulation statements that fire triggers comprises parsing the source code for UPDATE, DELETE, or INSERT statements.

45. (New) The method of Claim 43, further comprising:
recursively querying the database for one or more dependencies on triggers of code objects stored in the database based on the one or more data manipulation statements that fire triggers;
receiving an indication from the database of one or more dependencies on triggers of code objects stored in the database; and
incorporating the one or more dependencies on triggers of code objects stored in the database into the dependency information tracking array.

46. (New) The method of Claim 40, further comprising compiling one or more code objects stored in the database in debug mode using a database code object debugging tool.

47. (New) The method of Claim 40, further comprising identifying one or more dependent objects stored in the database that are INVALID.

48. (New) The method of Claim 40, further comprising identifying one or more cyclic dependencies among code objects stored in the database.

49. (New) The method of Claim 48, wherein identifying one or more cyclic dependencies comprises utilizing a graph traversal algorithm to identify one or more cyclic dependencies.

50. (New) The method of Claim 40, further comprising generating a dependency graph for code objects stored in the database based at least in part on the dependency information tracking array.

51. (New) The method of Claim 40, wherein the database comprises a database catalog; and

wherein querying the database comprises querying the database catalog.

52. (New) A method of generating dependency information for code objects stored in a database, comprising:

recursively querying a database for one or more dependencies of procedural code objects stored in the database;

receiving an indication from the database of one or more dependencies of procedural code objects stored in the database;

recursively querying the database for one or more dependencies of specifications of object-oriented code objects stored in the database;

receiving an indication from the database of one or more dependencies of specifications of object-oriented code objects stored in the database;

recursively querying the database for one or more dependencies of implementations of object-oriented code objects in the database;

receiving an indication from the database of one or more dependencies of implementations of object-oriented code objects in the database;

parsing the source code of the database for data manipulation statements that fire triggers;

identifying one or more data manipulation statements that fire triggers;

recursively querying the database for one or more dependencies on triggers of code objects stored in the database based on the one or more data manipulation statements that fire triggers;

receiving an indication from the database of one or more dependencies on triggers of code objects stored in the database; and

generating a dependency information tracking array based on the indications of one or more dependencies of procedural code objects stored in the database, one or more

dependencies of specifications of object-oriented code objects stored in the database, one or more dependencies of implementations of object-oriented code objects stored in the database, and one or more dependencies on triggers of code objects stored in the database.

53. (New) The method of Claim 52, wherein parsing the source code of the database for data manipulation statements that fire triggers comprises parsing the source code for UPDATE, DELETE, or INSERT statements.

54. (New) The method of Claim 52, further comprising compiling one or more code objects in debug mode using a database code object debugging tool.

55. (New) The method of Claim 52, further comprising identifying one or more dependent objects in the database that are INVALID.

56. (New) The method of Claim 52, further comprising identifying one or more cyclic dependencies among code objects stored in the database.

57. (New) The method of Claim 56, wherein identifying one or more cyclic dependencies comprises utilizing a graph traversal algorithm to identify one or more cyclic dependencies.

58. (New) The method of Claim 52, further comprising generating a dependency graph for the code object based at least in part on the dependency information tracking array.

59. (New) The method of Claim 52, wherein the database comprises a database catalog; and
wherein querying the database comprises querying the database catalog.

60. (New) A system for generating dependency information for code objects stored in a database, comprising:
a database operable to store code objects; and
a software module operable to:

recursively query the database for one or more dependencies of procedural code objects stored in the database;

receive an indication from the database of one or more dependencies of procedural code objects stored in the database; and

generate a dependency information tracking array based on the indication of one or more dependencies of procedural code objects.

61. (New) The system of Claim 60, wherein the software module is further operable to:

recursively query the database for one or more dependencies of specifications of object-oriented code objects stored in the database;

receive an indication from the database of one or more dependencies of specifications of object-oriented code objects stored in the database; and

incorporate the one or more dependencies of dependencies of specifications of object-oriented code objects stored in the database into the dependency information tracking array.

62. (New) The system of Claim 60, wherein the software module is further operable to:

recursively query the database for one or more dependencies of implementations of object-oriented code objects stored in the database;

receive an indication from the database of one or more dependencies of implementations of object-oriented code objects stored in the database; and

incorporate the one or more dependencies of implementations of object-oriented code objects stored in the database into the dependency information tracking array.

63. (New) The system of Claim 60, wherein the software module is further operable to:

parse the source code of the database for data manipulation statements that fire triggers;

identify one or more data manipulation statements that fire triggers;

recursively query the database for one or more dependencies on triggers of code objects stored in the database based on the one or more data manipulation statements that fire triggers;

receive from the database an indication of one or more dependencies on triggers of code objects stored in the database; and

incorporate the one or more dependencies on triggers of code objects stored in the database into the dependency information tracking array.

64. (New) A system for generating dependency information for a code object stored in a database, comprising:

a database operable to store a code object; and

a software module operable to:

recursively query the database for one or more dependencies of procedural code objects stored in the database;

receive an indication from the database of one or more dependencies of procedural code objects stored in the database;

recursively query the database for one or more dependencies of specifications of object-oriented code objects stored in the database;

receive an indication from the database of one or more dependencies of specifications of object-oriented code objects stored in the database;

recursively query the database for one or more dependencies of implementations of object-oriented code objects stored in the database;

receive an indication from the database of one or more dependencies of implementations of object-oriented code objects stored in the database;

parse the source code of the database for data manipulation statements that fire triggers;

identify one or more data manipulation statements that fire triggers;

recursively query the database for one or more dependencies on triggers of code objects stored in the database based on the one or more data manipulation statements that fire triggers;

receive an indication from the database of one or more dependencies on triggers of code objects stored in the database; and

generate a dependency information tracking array based on the indications of one or more dependencies of procedural code objects stored in the database, one or more dependencies of specifications of object-oriented code objects stored in the database, one or more dependencies of implementations of object-oriented code objects stored in the database, and one or more dependencies on triggers of code objects stored in the database.

65. (New) A computer-readable medium encoded with logic operable, when executed on a computer processor, to perform the steps comprising:

recursively querying a database for one or more dependencies of procedural code objects stored in the database;

receiving an indication from the database of one or more dependencies of procedural code objects stored in the database; and

generating a dependency information tracking array based on the indication of one or more dependencies of procedural code objects.

66. (New) The computer-readable medium encoded with logic of Claim 65, further operable to perform the steps comprising:

recursively querying the database for one or more dependencies of specifications of object-oriented code objects stored in the database;

receiving an indication from the database of one or more dependencies of specifications of object-oriented code objects stored in the database; and

incorporating the one or more dependencies of specifications of object-oriented code objects into the dependency information tracking array.

67. (New) The computer-readable medium encoded with logic of Claim 65, further operable to perform the steps comprising:

recursively querying the database for one or more dependencies of implementations of object-oriented code objects in the database;

receiving an indication from the database of one or more dependencies of implementations of object-oriented code objects in the database; and

incorporating the one or more dependencies of implementations of object-oriented code objects in the database into the dependency information tracking array.

68. (New) The computer-readable medium encoded with logic of Claim 65, further operable to perform the steps comprising:

- parsing the source code of the database for data manipulation statements that fire triggers; and

- identifying one or more data manipulation statements that fire triggers.

- recursively querying the database for one or more dependencies on triggers of code objects stored in the database based on the one or more data manipulation statements that fire triggers;

- receiving an indication from the database of one or more dependencies on triggers of code objects stored in the database; and

- incorporating the one or more dependencies on triggers of code objects stored in the database into the dependency information tracking array.

69. (New) A computer-readable medium encoded with logic operable, when executed on a computer processor, to perform the steps comprising:

- recursively querying a database for one or more dependencies of procedural code objects stored in the database;

- receiving an indication from the database of one or more dependencies of procedural code objects stored in the database;

- recursively querying the database for one or more dependencies of specifications of object-oriented code objects stored in the database;

- receiving an indication from the database of one or more dependencies of specifications of object-oriented code objects stored in the database;

- recursively querying the database for one or more dependencies of implementations of object-oriented code objects in the database;

- receiving an indication from the database of one or more dependencies of implementations of object-oriented code objects in the database;

- parsing the source code of the database for data manipulation statements that fire triggers;

- identifying one or more data manipulation statements that fire triggers;

recursively querying the database for one or more dependencies on triggers of code objects stored in the database based on the one or more data manipulation statements that fire triggers;

receiving an indication from the database of one or more dependencies on triggers of code objects stored in the database; and

generating a dependency information tracking array based on the indications of one or more dependencies of procedural code objects stored in the database, one or more dependencies of specifications of object-oriented code objects stored in the database, one or more dependencies of implementations of object-oriented code objects stored in the database, and one or more dependencies on triggers of code objects stored in the database.